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By Paul Guzzardo

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Transit Digital Art Lab: A Case Study

Paul Guzzardo

Transit Digital Art Lab: A Case Study chronicles the development and design of a 2002 -2003 digital art prototype. This article is culled from memorandums, contracts, emails and hundreds of drawings and graphics which make up this MIL prototype 2002 -2003 archive. The archive describes an early attempt, and maybe the first to combine a light rail infrastructure and digital art technologies. This transit platform – this prototype - was not only an experiment in digital art making, it was experiment in sustainable change. The goal was to introduce a Media Information Literacy brief into a city. This experiment took place in St. Louis, Missouri. St. Louis has rich media ecology heritage. The heritage is traced to the arrival of Marshall McLuhan in 1937, and to McLuhan's student the Jesuit Scholar Walter Ong. St. Louis was selected for this experiment because of that tradition of critical and reflexive thinking.

Now nearly seventeen years later, the events surrounding this Transit Digital Art Lab offer a Media Information Literacy city lesson. The Case Study that follows suggests not only how cities and societies might use technical knowledge for sustainable change, but also presents a stark warning of the obstacles blocking the development of "City MIL" infrastructures and interfaces.[1]

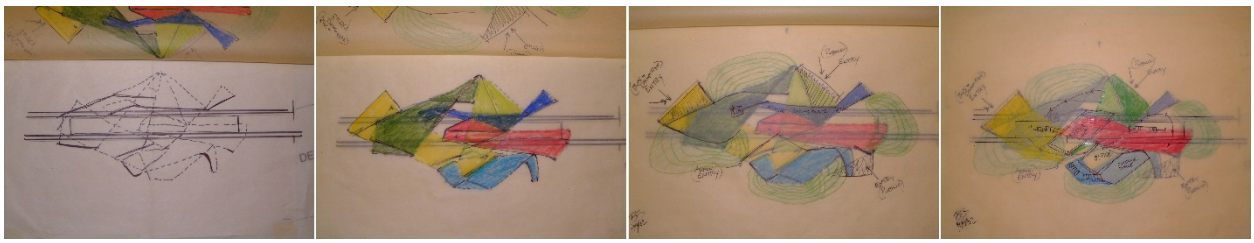

Figure 1[2]

I. A Machine in Two Parts: A History

In 2002 a Transit Digital Art Lab prototype was proposed for a chain of new light rail stations. The prototype was designed to act as an accessory, and an insertion into an already advanced and expanding transportation system. This prototype was vanguard. It was recipe for a MIL City "MACHINE."

Machine Part 1: Bi - State Metrolink[3] is a light rail transit system serving the Illinois and Missouri (USA) - Bi-State St. Louis Metropolitan region. The Metrolink light rail construction began in 1990. The initial 17-mile (27 km) segment ran from Lambert-St. Louis International Airport to East St. Louis, Illinois. Nineteen stations opened in 1993. In 2005 Metrolink underwent a major expansion, with 8 miles of track and 9 new stations, and a major redesign of an existing station. This 8-mile (13 km), 9-station extension was funded by a $430 million Metro bond issue. The extension opened to the public on August 26, 2006.

Machine Part 2: Arts in Transit, Inc. (AIT)[4] is the non- for-profit organization that facilitates public art programs and community engagement projects on the Bi State Metro Transit system. The mission as stated on the AIT website is "to support the creation and integration of excellent art and design within the Metro Transit system in order to enhance the transit experience and to connect bi-state area communities to the arts." The coupling of "Arts and Rails" is traced back to the first phase of Metrolink construction in the late 1980s. That is when AIT launched "ArtLink", a series of temporary public art installations by regional and national artists along the developing route. As note on the AIT website "These works brought community awareness and excitement to the developing transit system."[5]

As digital technology advanced Metrolink adopted it, and Metrolink enthusiastically presented its early adoption of technology to the public. The Metrolink news release below is both: 1) a surveillance - security tech inventory, and 2) a celebration of "what was coming down the line." [6]



Figure 2

Author: *e-mail: guzzardopaul@gmail.com*

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The News Release: According to the Bi-State agency, a joint commission formed by Missouri and Illinois, security for the extension will be comprehensive and high-tech. SES Co. Inc. (Hingham, Mass.) is responsible for installing all communications systems associated with the line, including laying the backbone for the *fiber optics, as well as peripherals.*

Technology used on this latest extension exemplifies how far railroad security has advanced since the days of the bulls "heavy-handed rail cops" who earned a reputation for limited patience and brutality. While the bulls were often accused of having eyes in the back of their heads, today, *closed circuit television actually delivers* on the notion.

Bi-State's system has integrated CCTV featuring Vicon fixed and pan-and-tilt cameras. Officials will be able to monitor stations and parking lots along the 17-mile extension from a *central control facility* in St. Louis.

"We have *fixed cameras on the platforms and pan-and-tilt units* in the parking lots," explains Jon Soucy, project communications assistant manager with Bi-State Development in St. Louis.

"The pan-and-tilt cameras, housed in domes, are located on poles in the parking lots. Two *fixed cameras are installed on each station platform to monitor crowd control, train movement and station activity.* There is one on each end, and they point straight down the line toward the oncoming trains so they can view the entire platform," explains Ron Simpson, resident engineer for communications on the project.

The cameras throughout the MetroLink system are monitored 24 hours a day, as well as *recorded via analog video recorders.*

A 9832 fox-dBm broadband multiplexer transmits analog CCTV through a digital backbone. The multiplexer, manufactured by Fiber Options, Bohemia, N.Y., *transmits video, audio and data signals from a central site to nine remote field sites.*

"Due to the transmission distance and bandwidth requirements*, a single-mode fiber optic line was used, which is also immune to electromagnetic interference,*" adds Simpson.

"Using *Fujitsu FLM150 multiplexers and four fibers two in each direction the transmission is guaranteed via redundancy.* So, if we lose one station, it will send the signal back the other way." [7]

II. A Street Media Art Lab



Figure 3[8]

While lite rail was ratcheting up its high-tech security inventory it was becoming obvious to some in the leadership of Bi - State Metrolink and Arts in Transit that a traditional public art brief was more and more out of sync with what was happening in the transit sphere. The static art brief was hollowing out, the format was becoming a dated cliché.

In 1999 the author, with a group of collaborators, opened a street media art lab. The lab operated a few blocks from one of the downtown St. Louis light rail stations. Three nights a week, off and on, for three plus years this corner media lab pumped out “recursive digital tableaus” in street front windows. This “lab-radar station” has been described in a mix of publications and documentaries. The selections which follow outline the street lab’s emerging MIL praxis:

CARTOGRAPHERS DILLEMA: The lab wrapped a windowed corner in downtown St. Louis. Artists used digital collage,

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remix to create new urban narratives, to map and re-mythologize the streetscape. Their work, the evening's digital amalgam/remix was projected on screens and monitor walls facing the street. Subject matter included meditations on film/digital editing; art/science practice; the effect of information technology on social practice; 9/11; the millennium, comic books; and Orwellian media culture. It ran off and on for a couple + years. It was street theatre, a tool to advance synthesis and awareness, with the hope that it might lead to collective action. The lab was blended place, a straddled one. It was on the street, sort of polis update: Release 99.[9]

The MEDIATED CITY AND PUBLIC: A large array of video screens was mounted in the windows, and the virtual jockeys (VJs) on duty produced and displayed thousands of digital media images -- images grabbed from the Internet, remix works, surveillance-as-spectacle webcam videos of people in the vicinity of the storefront, messages about digital media (e.g., "How will the digital agora change the way we interact?"), and images of people from far corners of the globe, especially on New Year's Eve 2000. In the days after 9-11, Media ARTS displayed huge memento mori of the attacks--images from ground zero, the list of victims' names, transcripts of their final phone calls. Many gathered at the corner of Tucker and Washington to watch.[10]



Figure 4[11]

Shortly after the destruction of the Trade Towers, the windows in the lab were transformed into commemorative remix, a shifting digital memorial to the victims of World Trade Center. It was a "Memento Mori."[11]

In those days following the fall of the towers a senior AIT curator frequently visited the media art lab, and became more acquainted with the lab's MIL digital art praxis.[12] Eventually the AIT curator and the author discussed how the street lab might offer – a new example - for the coming rail transit expansion. The text excerpts that follow are from early emails and memorandums between the author and the AIT staff. They describe the street media lab's MIL brief, and how the brief can empower new networks of cooperation in the use of new infrastructures and technologies. Segments follow:

> … it was a hybrid performance place and computer lab – where artist, students, and information technology specialist created work alone or in conjunction with one another.
>
> …offered an expanded opportunity to investigate how convergent information technology can offer an interactive context to create groups experience and engage the public, rather than contribute to social fragmentation and individual isolation.



Figure 5

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…the mission is to encourage people to critically investigate the role of technology in our culture[13] '.. artist have been employed who are not only adept at computer art, Internet design, and digital video, but are critical thinkers who are able to take on the issue of critically investigating the role of technology in our community.

…use of these technologies on a public stage is one step toward attempting to both provoke a critical debate on these issues. These technologies because of the inherent insular nature have fragmented society and isolated the individual.

…lab project has largely been focused on how on how these technologies can bring us together to foster community and engage and nourish the "Civic Soul."

III. The Prototype

In response to this ongoing dialogue, the author was asked to submit a proposal for the Metrolink station extension. A team was assembled. The team was composed of the author, an architect, a multimedia artist, and a documentary film producer. The team was called *The New Media Design Group.*[14] The archival passages cited below are from the 2002 *New Media Design Group* proposal to Metrolink. They show an effort - maybe one of the first - to introduce a MIL brief into a large-scale transportation infrastructure, an infrastructure being reshaped by digital technologies and wireless networks. The archive also demonstrates how urban infrastructure design can encourage critically and reflexively, and push us towards positive and sustainable change.

The New Media Design Group proposes to introduce digital media as public art into the design of the new transit extension. We believe that we offer an exciting vision for dynamic, site–specific multi-media public art associated with the Cross County Metrolink Expansion.

Why Digital Media? Increasingly, our world is saturated with media images, and our society's connection are digital in nature. As digital artists and designers we have been exploring this new reality and offering creative approaches to interaction between people, art, and digital networks.

We propose an alternative to static art installations. We propose complicated, dynamic experiences that engage the public in a critique of our media-saturated world. More than mere digital wallpaper,

our installations will be critically connected to the very nature of network transportation systems and network information systems.

The New Media Design Group believes the inclusion of digital media art technologies in the Cross County Metrolink Expansion will benefit the arts and the diverse communities served by the transit system by:

1) Establishing digital media art as a visible signature piece of the metro extension.
2) Activating the stations as a location for cutting-edge arts experiences.
3) Engaging the public with a provocative and intriguing presentation of visuals, with a focus on transportation and community.
4) Creating an interactive context to forge group experience and engage the public.
5) Demonstrating how these new digital technologies can be sensitive to human rituals, interactions and procedures.
6) Offering multi-media artists venues to make and display work, thereby establishing St. Louis as an important national and international artistic venue.
7) Encouraging partnerships between the arts community and telecommunications/information technology industry, by providing IT companies' public venues to showcase new and more robust broadband delivery systems, and state-of-the-art hardware and software applications.
8) Encouraging people to critically investigate the role of technology in our culture.

The New Media Group submission further stated:

The New Media Design Group believes the inclusion of digital media art technologies in the Cross County Metrolink Expansion fits perfectly with the Metrolink environments, where fascinating parallels exist between moving people and moving data. People move on transportation networks. Data moves on information networks; that worldwide complex of inter-linked cellular networks of communication, finance and information. Today Metrolink passengers operate various digital cellar hand held information devices while waiting in stations or travelling on trains. Future passengers on the Cross County Metrolink Expansion will be even more embedded in information networks.

We propose prototype projects, projects which allow media artists the opportunity to explore and critically examine the relationships and connections between the complicated, dynamic experiences created in the intersection of these two networks, this riding experience of the very near future. These prototype projects will promote alliances and partnerships with the information network economy and, by doing so will advance the ongoing development of digital art. The Cross County Metrolink Expansion provides an extraordinary opportunity for this to be done.

During project development the digital media lab brief was further developed and refined, and this was added.

A hybrid performance place and computer lab – where artist, students, and information technology specialist create work alone or in conjunction with one another.

A digital new media lab presents an opportunity to investigate how convergent information technology can offer an interactive context to create groups experience and engage the public, rather than contribute to social fragmentation and individual isolation.

A visible urban demonstration on how we consume and are simultaneously consumed by digital media.

A force in re-imaging and recreating public spaces, demonstrating the spatial/urban consequences of digital convergent technologies and understanding the spatial importance of these technologies in a real environment, serving as an urban reference point for the entire city.

After multiple of reviews, presentations, and "short-lists" The New Media Design Group was selected. Its assigned task was:

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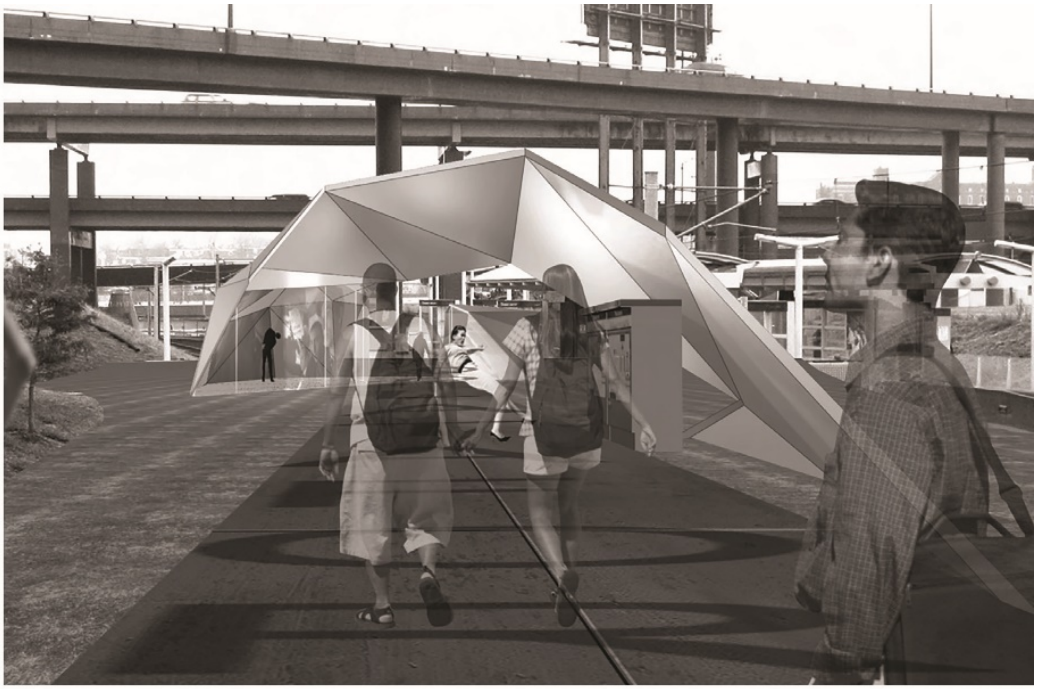
"to develop a transit-specific media lab prototype for adaptation and use in and around the St. Louis MetroLink system, to explore the ways in which digital media elements could be integrated with infrastructure and adapted to meet various physical and operational constraints, and to investigate optimal flexibility for exhibiting the widest range of digital/media art and incorporating various interactive elements in different Metrolink station environments."[15]

To execute this program, *The New Media Design Group* entered into a collaboration with the architectural and engineering school, *The New Jersey Institute of Technology* (NJIT).16 The purpose of the alliance was to develop "drawings, schematics and models for: 1) A state-of-an-art digital media prototype that could be adapted to multiple stations, and 2) A media hub at the new Shrewsbury light rail station. Metrolink would also be provided with an inventory of digital software and hardware available for incorporation into the prototype, and into the Shrewsbury media hub.

IV. The Output



People move on transportation networks.
Data moves on information networks
-a worldwide network of interlinked communication, finance and information.

The project should function as a prototype without a predetermined form. It should be conceived so that it adapts to different sites and programs without loosing its unique identity.

The introduction of digital media as public art into the design of the new transit extension offers an exciting vision for dynamic, site-specific multi-media public art associated with the Cross County Metrolink Expansion in St Louis, Missouri.

a) *A Summary Description of the Adaptable Multistate Prototype*

A flexible media shell structure consists of geometrically irregular, three-dimensional framing. The initial geometry of the form is constructed in an architectural three-dimensional computer model. The structural model, derived directly from this architectural model, contains all of the joint geometry. Using currently available computer aided drafting and manufacturing technologies (CAD/CAM), the joints, with all the irregular geometry of the structure, can be fabricated directly from the computer. Since, the connecting members are all straight sections. The geometric complexity of the structural design and construction is embedded in the connections. This complexity is completely manipulated within the computer, allowing the construction to remain relatively simple. The precision inherent with CAD/CAM construction techniques assures accurate assembly of the structure.

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b) The Adaptable Multistate Prototype Drawings[17]

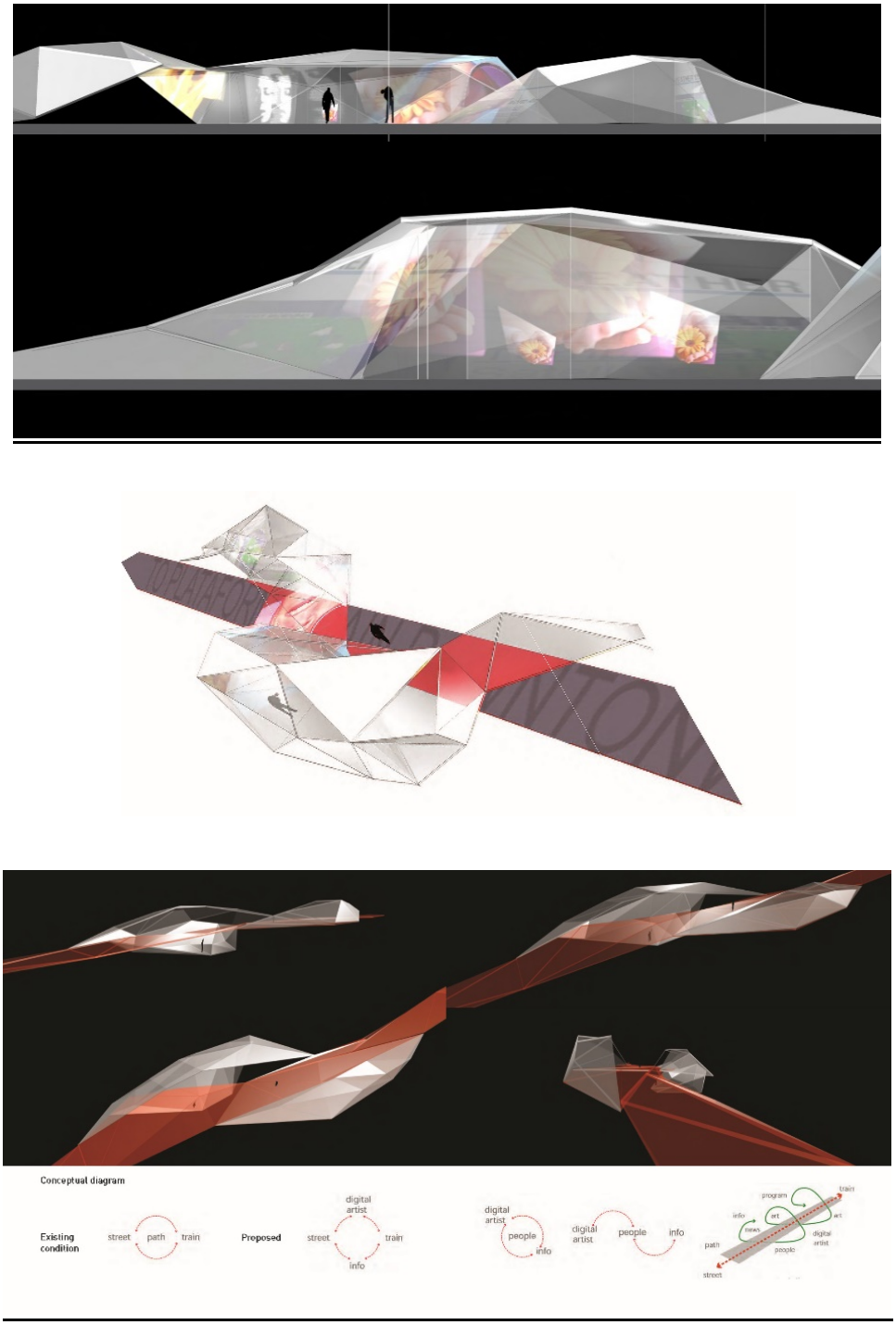

Figure 7

c) Shrewsbury Media Hub

The Shrewsbury station was one of nine new stations. Locate on the boundary-line between St. Louis and Shrewsbury Mo., the station's platform was designed to accommodate a future extension of the light rail line. The Shrewbury station opened on August 26, 2006, along with the rest of the Cross-County Extension. [18]

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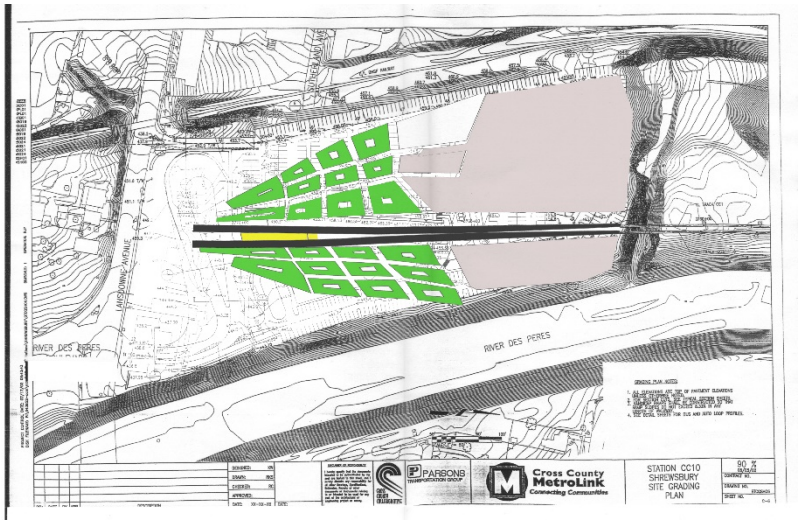

Figure 8

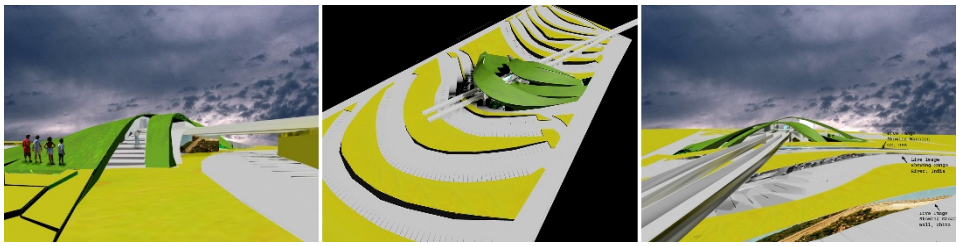

Figure 9[19]

While the drawings and schematics were being developed, the New Media Design Group assisted Bi-State Metrolink and AIT in preparing a proposal to fund the Adaptable Multistate Prototype and the installation of a largescale information imaging and display system at the Shrewsbury station. The proposal was submitted to the *Resources for Change: Technology National Endowment for the Arts (NEA)*. Here's part of what was in the NEA request.[20]

> AIT is currently playing a key role in the light rail Cross County MetroLink Extension http://www.crosscounty.org/aboutcc.htm by coordinating the involvement of artists on the design collaboration team and creating opportunities for public art during the construction and operation phases.
>
> *A "Resources for Change:* Technology" funding initiative will allow AIT to continue serve both the arts community and light rail passengers. The desired result are media installations that will, in keeping with our mission, integrate arts in new ways in the community and involve individuals in new and active ways with the arts. These media installations may act as the direct delivery mechanism for works of digital art, such as interactive sound and video experiences on a train platform or in a corridor underground. In other cases, the media installations may deliver cultural/arts information about local arts projects, dance performances, symphony programs, etc.



Figure 10

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This information age /public art project will allow the Cross-County extension to serve both as a rail transit point of departure/ arrival and as an ongoing critique of our "information age". This creative interaction between people, art, and digital networks in public space will serve as a model for other arts organizations.

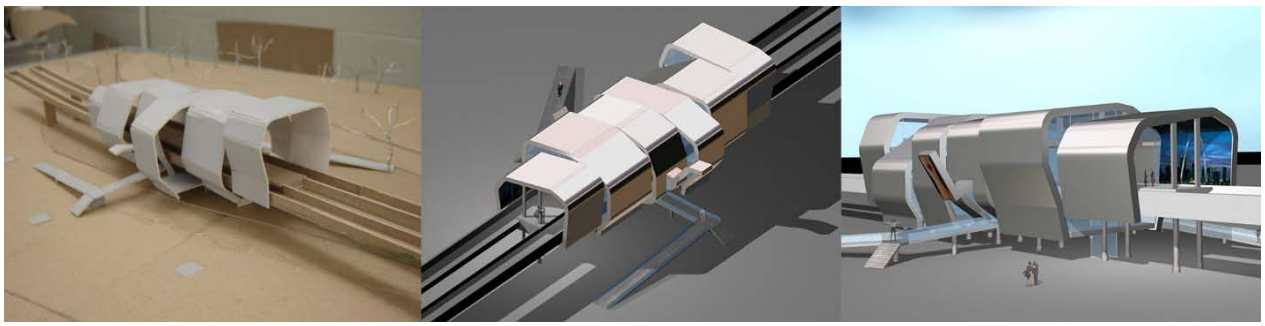

Figure 11: Study Shrewsbury Station [21]

But the most prescient passage in the 2003 submission was this.

> By demonstrating, in non-traditional arts public spaces, the arts ongoing participation in digital information networks it will confirm the continued relevancy of the arts. It will establish how the arts, can in this current commercial media environment, begin to prevent new media network platforms from devolving into an information age of "shock radio" or "cable on speed".

V. A Reversal

The parties all understood the Adaptable Prototype and the Shrewsbury Media Hub drawings would be used to raise public awareness of this MIL City brief. It set out in the contract.

- to find appropriate exhibition venues
- to arrange thoughtful reviews of design professionals
- to publicize the partnership and resulting designs in relevant media

All recognized that it was important to demonstrate to the community that new infrastructures and technologies could optimize learning and innovation on the street.

Unfortunately, there was a sudden change in personnel at Arts in Transit during the development of this MIL platform. What began as a hesitancy on AIT's new team developed into a seeming opposition to the MIL brief. The project stalled. Nothing was exhibited. And nothing was built.

Now years later, now that we're tumbled into a media ecology of toxic social bubbles, fake news, and weaponized data it is important to ask why. Why did it fail? Why did this MIL City experiment stall at a crucial time? These question drives this article. And it is why it's being written now.

Clearly if the goal is to realize the framework of MIL Cities (UNESCO, 2018) is:

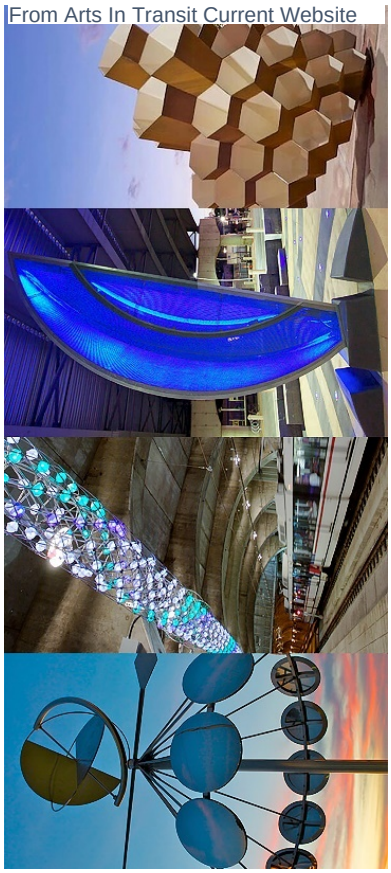

Figure 12

> *...educating, empowering and empowering city dwellers of all age groups and social classes, as well as the various stakeholders from the most traditional to the least traditional to establish networks of cooperation and make critical, ethical, truly creative, effective and responsible use of the new infrastructures and technologies offered by contemporary cities.*

Well then, we need to come with some answers. Why couldn't we bring storytelling creatives into these transit stations? Why weren't they there (and ready) to incite reflectivity about the digital whirlpool we were falling into?

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There is no simple answer, but looking back it is clear that the entrenched creative arts community was not ready to support the project. They were not prepared for what coming, and (I believe) were frightened by it. The successor curators were more inclined towards supporting the existing traditional public art programs. People were "invested" in that the old way of seeing, making and showing. Sadly, they were not committed to the relevancy of the arts in a changing world. Unfortunate, but maybe not so surprising. What was proposed would completely alter a public arts program, one that had been in operation for years. In 2003 the New Media Group and NJIT confronted a dilemma that the art historian Claire Bishop wrote about years later:

> *"While many artists use digital technology, how many really confront the question of what it means to think, see, and filter affect through the digital? " …How many thematize this, or reflect deeply on how we experience, and are altered by, the digitization of our existence?"* [22]

This Metrolink MIL City brief was an early attempt to use a transit stage to begin to *reflect deeply on how we experience, and are altered by, the digitization of our existence.*

VI. An Epilogue

The Transit Digital Art Lab was the subject for an earlier article. *Tunnel Vision: An Architecture of Reflexivity* was written by the author in 2010, and published in 2014. It was in the architectural monograph "Displaced: The Work of Fabian Llonch and Gisela Vidalle."[23] *Tunnel Vision* opened with a quote from the philosopher Hannah Arendt. It is repeated here.

> What makes mass society so difficult to bear is not the number of people involved, or at least not primarily, but the fact that the world between them has lost its power to gather them together, to relate and to separate them. The weirdness of this situation resembles a spiritualistic seance where a number of people gathered around a table might suddenly, through some magic trick, see the table vanish from their midst, so that two persons sitting opposite each other were no longer separated but also would be entirely unrelated to each other by anything tangible.



Figure 13: Hannah Arendt[24]

Tunnel Vision ended with this.

> "Maybe the table didn't vanish. Nothing disappears any more. In today's digital playing field things don't go away. They sit there. They pile up on top of one another. What's left is a heap. The communal circle may be busted, but Arendt's séance table is still there. It's just covered with debris, so we can't see it or who's around it."

The goal of the MIL City is not only to clear the debris so we can see one another, but so we can see the path to sustainable change.

References Références Referencias

[1] *As is often argued, smart cities need smart citizens. In this light, MIL Cities proposes the MIL programmes in and by cities, as well as the development of new infrastructures and interfaces on the street. MIL Cities will recognize and celebrate those cities/communities where generate new MIL learning.* A Global Framework for media and Information Literacy Cities- Global MIL Week-MIL Cities: Voices, Power, and Change Makers - Adopted the Global Framework for Media and Information Literacy Cities (MIL Cities) Kaunas Lithuania 2018.

[2] 4 Line Drawings – NJIT- Brian Sweeney

[3] https://www.metrostlouis.org/history/

[4] https://www.artsintransit.org/

[5] https://www.artsintransit.org/about/

[6] The bold lettering is for editorial emphasis

[7] MetroLink Light Rail System Extends to Illinois, March 26, 2001

[9] An abridged version of The Cartographer's Dilemma by Paul Guzzardo and Lorens Holm was published in Urban Design: Issue 114 - Spring 2010. The complete paper was presented at the 2nd International conference on sustainable architecture and urban development in conjunction with the Center for the Study of Architecture in the Arab Region (CSAAR)- 12-14 Jul 2010, University of Jordan, Amman Jordan.

[10] CONNECT!ONS/Med!aLit Moments • September 2014 • 16

[11] From the media arts web site: The Media Lab in response to the tragic events of September 11, 2001,

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suspended its regular arts programming. The walls of monitors and screens were dedicated to displaying work created as a memorial to the World Trade Center victims. This commemorative included among the tragic imagery of that day the scrolling names of those lost in the attack and the text of the sad and final phone messages of victims. The lab artists mixed their own edited video shorts with these scrolling names, the transcribed calls, and internet updates. This live collage was projected onto screens facing the street. So within a few days after the Trade Center attack, people walking in downtown St. Louis could watch digital artists wrestling with the medium as they tried to give voice to a memorial. It was a complex and beautiful performative piece. It may have been the only place in the country where something like this was done -

[12] The emails that follow document the starting point of this MIL transit lab. It should be noted that between the first email and the last one - September 12th and September 17th 2001 - the Media Lab suspended its regular arts programming. The walls of monitors and screens were dedicated to displaying work created as a memorial to the World Trade Center victims.

September 12, 2001 1:03 PM > Subject: arts in transit > > > > Paul, > > > > I'm the public art manager at Arts in Transit, a position > roughly> equivalent > > to that previously held by Emily Blumenfeld. I wonder > whether you've> > considered possible collaborations with AIT? When I > passed your space on > > washington recently, I wondered whether there might be a> small project we > > could begin with...see where it goes. In November, > Critical Mass sponsors > a > > three day event "Passport to Contemporary Art," which will> bring a fair > > number of people to your area...thought this might be a > good excuse to try> > something? > > > > Let me know what you think. > > > > best, > > Jenny Strayer >

From: paul guzzardo [mailto:zio11@mindspring.com] > Sent: Wednesday, September 12, 2001 2:28 PM> To: Strayer, Jenny L. > Subject: Re: arts in transit > > jenny > I think a collaboration would be great to explore. > Shall we try to set up some time to get together.> I'm forwarding this on to my board member and media lab > partner Margie > Newman. > My number is 231-8784. > Paul guzzardo > > ----- Original Message ---->

From: "Strayer, Jenny L." <jstrayer@bsda.org> To: "'paul guzzardo'" <zio11@mindspring.com>Sent: Monday, September 17, 2001 2:45 PM Subject: RE: arts in transit

> Paul > > Thanks for your reply...Let me get back with you about a specific time for > the meeting. Went past your site today.. fabulous. > > jenny > >

[13] Tableau image – Media Arts Lab

[14] Alan Burnettin-Painter and Digital Artist
Paul Guzzardo - Designer and Attorney
Fabian Llonch - Llonch+Vidallé Architects
Margaret Newman - Documentary Film Producer

[15] Bi-State and NJIT were the signatories to the contract. There were ancillary agreements and understandings regarding the derivative - 3rd beneficiary rights of The Media Design Group in this Contract. These were entered to between The New Media Design Group and Fabian Llonch as the representative of NJIT.

[16] Fabian Llonch _ comprehensive studio fall 2002- A Proto-(type) for a Metro Station- NJIT School of Architecture Newark, NJ- New Jersey Institute of Technology Student – Designers List: Arios Choi, Constance Kim, Dario L. Pasquariello, Joel W. Petty, Vincent Rea, Seila Reviriego, Maibi Rojas, Christopher Sedita, John J. Setaro Jr., Alexandra Shull, Andrea Sommer, Brian Sweeney, William Van Why Jr.

[17] Displaced: Llonch+Vidalle Architecture, Oscar Riera Ojeda Publishers; Box edition (Sept. 1 2015)

[18] Bi- State Shrewsbury Station Master Paln

[19] Shrewsbury Media Hub - Study

[20] NJIT – Shrewsbury Station – Study

[21] NJIT – Shrewsbury Station – Study

[22] Claire Bishop, Digital Divide: Contemporary Art and New Media, ARTFORUM September 2012 https://www.artforum.com/print/201207/digital-divide-contemporary-art-and-new-media-31944

[23] Fabian Llonch was the architect on The New Media Design Group. He was also a professor of architecture at The New Jersey Institute of Technology in 2002-2003. He directed the NJIT studio which produced many of the images displayed in this article. Llonch's in his architectural practice, Llonch+Vidallé, produced the Adaptable Multistate Prototype drawings.

[24] The video stills are from a 1964 interview of Hannah Arendt conducted by the German journalist and politician Gunter Gaus.

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